



(12) EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
02.04.2003 Bulletin 2003/14

(51) Int Cl.⁷: **H04L 12/28**, **H04L 29/06**,
H04B 7/26

(43) Date of publication A2:
25.10.2000 Bulletin 2000/43

(21) Application number: 00303366.9

(22) Date of filing: 20.04.2000

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE
Designated Extension States:
AL LT LV MK RO SI

(72) Inventors:

- **Sabat, John, Jr.**
Merrimack, New Hampshire 03054 (US)
- **Bianchi, Charles H.**
Durham, New Hampshire 02824 (US)
- **Greenwood, Ken C.**
Bedford, New Hampshire 03110 (US)

(30) Priority: 21.04.1999 US 130445 P
14.06.1999 US 332518

**(74) Representative: Greenwood, John David et al
Graham Watt & Co.
St. Botolph's House
7-9 St. Botolph's Road
Sevenoaks Kent TN13 3AJ (GB)**

(71) Applicant: Transcept, Inc.
Manchester, NH 03103 (US)

(54) **Architecture for signal distribution in wireless data network**

(57) A simple and low cost architecture for coupling wireless local area network signals between geographically distributed access points and centrally located internetworking devices. A cable access point (CAP) is associated with each respective microcell. Each CAP includes a remote bridge to convert such signals to a convenient transport format depending upon the available cabling. For example, if the available cabling is a cable television (CATV) plant, the transport signals are first converted to a T1 format and up-converted to a carrier frequency suitable for the CATV plant. Alternatively,

the transport signals may be converted to IEEE 802.3 cable modem signals. If the available cabling is twisted pair telephone type wiring, the remote bridge converts the transport signals to a suitable Digital Subscriber Line (xDSL) format. The transport signals are collected at a central distribution or head end access point (HAP). At this location, a remote bridge then converts the signals from the up-converted T1 format or the xDSL format, back to the Ethernet local area network format. These Ethernet signals are then suitable for coupling to a local area network hub or other internetworking equipment such as repeaters, bridges, routers, and gateways.

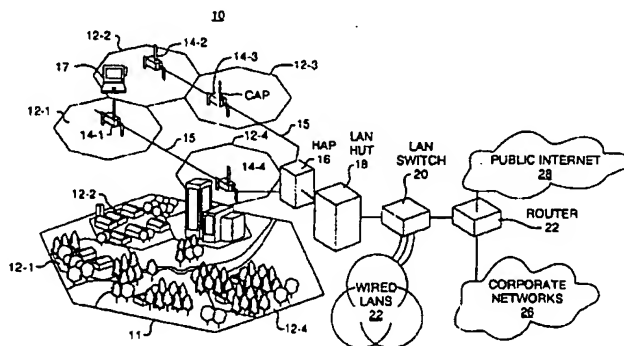


FIG. 1



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 00 30 3366

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	GB 2 300 549 A (NORTHERN TELECOM LTD) 6 November 1996 (1996-11-06) * page 1 - page 5 * * page 7 - page 8 *	1-7	H04L12/28 H04L29/06 H04B7/26
X	US 5 381 459 A (LAPPINGTON JOHN) 10 January 1995 (1995-01-10) * column 2 - column 3 * * figure 1 *	1-7	
X	US 5 421 030 A (BARAN PAUL) 30 May 1995 (1995-05-30) * column 1 - column 3 * * column 5, line 65 - column 6, line 20 *	1-7	
A	WO 98 29922 A (ERICSSON GE MOBILE INC) 9 July 1998 (1998-07-09) * page 2 - page 4 *	1-3,6,7	
A	EP 0 827 339 A (PIONEER ELECTRONIC CORP) 4 March 1998 (1998-03-04) * column 1 - column 3 *	1-7	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
A	ESTRIN D L ET AL: "CABLE TELEVISION NETWORKS AS AN ALTERNATIVE TO THE LOCAL LOOP" JOURNAL OF TELECOMMUNICATION, NETWORKS, COMPUTER SCIENCE PRESS INC. MARYLAND, US, vol. 3, no. 2, 1984, pages 103-115, XP002015816 * page 103 - page 106 * * page 112 *	1-7	H04L H04B
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 5 February 2003	Examiner Englund, T
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 02.92 (P4-C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 30 3366

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

05-02-2003

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
GB 2300549	A	06-11-1996	US	5953670 A	14-09-1999
US 5381459	A	10-01-1995	CA	2067637 A1	30-01-1993
			DE	69215025 D1	12-12-1996
			DE	69215025 T2	28-05-1997
			EP	0526285 A2	03-02-1993
			JP	2766430 B2	18-06-1998
			JP	6098046 A	08-04-1994
US 5421030	A	30-05-1995	AU	2782092 A	27-04-1993
			EP	0604592 A1	06-07-1994
			JP	6510894 T	01-12-1994
			WO	9306669 A1	01-04-1993
WO 9829922	A	09-07-1998	AU	731234 B2	29-03-2001
			AU	5525898 A	31-07-1998
			BR	9713810 A	25-01-2000
			CN	1247641 A	15-03-2000
			EP	0950270 A1	20-10-1999
			WO	9829922 A1	09-07-1998
EP 0827339	A	04-03-1998	JP	10070565 A	10-03-1998
			EP	0827339 A2	04-03-1998
			US	6484318 B1	19-11-2002

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82